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ABSTRACT

The Louis W. and Maud Hill Family Foundation is engaged in a productivity program to assist private colleges in its eight state service region (Minnesota, Iowa, North Dakota, South Dakota, Montana, Idaho, Oregon, and Washington) in controlling escalating costs while maintaining educational quality. The Hill Foundation's effectiveness could probably be improved through longer (three to five year) commitments of larger sums of money ($10,000 to $100,000) to a limited number of colleges that: (1) would be willing to risk effort on important productivity research but would be unable to do so without external funds and supportive consultation; (2) would be devoted to rigorous project design and evaluation; and (3) would agree to the publication and dissemination of results. If, in addition, the Foundation would enter into partnerships with colleges that recognize that the productivity question in higher education is not one of how to reduce the time and money spent per student but rather how to increase the value of student-embodied competencies to create and produce over a lifetime, the foundation might well bring about the major program and faculty changes that will assure a college's survival during the last quarter of this century. (Author/MSE)

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"She Runs, and She Can Be Improved!"*

An Evaluation of the Hill Family Foundation Independent College Program: Increasing the Productivity of the Teaching-Learning Process

David R. Witmer**
La Crosse, Wisconsin
16 October 1974

Evaluations can be divided into two categories, those upon which we act, and those about which we merely think, talk, and write. This evaluation, though in the second category, is based on a review of 38 pertinent documents; 23 prescheduled and 30 spontaneous interviews and conferences during site visits to Wartburg College, Waverly, Iowa, Drake University, Des Moines, Iowa, Augustana College, Sioux Falls, South Dakota, and Gustavus Adolphus College, St. Peter, Minnesota; 19 years' experience in teaching and the administration of higher education; and 9 years of study of the costs, benefits, outcomes, and value of college education. It is written from the perspective of one who recognizes the advantages of the economic system, over the political system for deriving social valuations, and one who believes that function, doctrine, system, and organization each provide valid bases for the assessment of institutions.

Productivity is the measure of benefits over cost. Increasing benefits while increasing costs at a slower rate, holding costs the same, or decreasing costs yields higher productivity as does decreasing costs while decreasing benefits at a slower rate, holding benefits the same, or increasing benefits. Holding benefit-cost ratios constant is not tantamount to increasing productivity, widely held conviction to the contrary in higher education notwithstanding.

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*Henry Ford's evaluation of his first "rig" after he and Clara had completed that memorable spin around the block. Reported by Roger Burlingame in Henry Ford, A Great Life in Brief.

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Costs and benefits should be measured in comparable terms. Although costs per credit and costs per student have been rising since 1890, so has the value of benefits per credit and the value of social and economic contributions to public welfare per student.[1] Indeed, the net value or return on investment in higher education has been relatively constant for the past 80 years at a level higher than the return to investment in other public and private enterprises, and it can be expected to increase during the years ahead as the transition to higher education for all qualified students is made and the college degree becomes a credential required at the threshold to good employment. Inasmuch as the rates of return on total social investment in college education exceed the rates of return on private (personal) investment in college education, the decision of the Hill Family Foundation to invest in college education as a contribution "to the public welfare" is in keeping with its commendable founding purposes and a good choice from among the alternatives before it today.[2]

1. Goals. a. Findings. Pursuant to the decision of the Board of Directors at a special meeting in November 1971, the Louis W. and Maud Hill Family Foundation is engaged in a productivity program to assist private independent colleges in its eight state service region (Minnesota, Iowa, North Dakota, South Dakota, Montana, Idaho, Oregon, and Washington) in controlling escalating costs while maintaining educational quality. This goal, which is in consonance with the legitimate role of tax exempt foundations, realistically recognizes Hill Family Foundation limitations in focusing on the part of the country within which its wealth was created, in selecting a population limited to 80 institutions, and in promising assistance rather than full support.[3]

The underlying assumption that colleges provide outstanding opportunities for investment in the common welfare is well-founded, and supported by research results. Despite dramatic increases in enrollments,

the costs of resources, and the number of graduates, the rate of return on investments in college education has remained very high. Nonetheless, the productivity of colleges needs serious attention because of impending declines in the traditional college-age population which, in the absence of substantial, well-executed adjustments, could drastically alter this bright prospect.

The implicit assumption that investments in the improvement of the productivity of private, independent colleges will yield greater returns than investments in public colleges is open to serious challenge. What causes students, and through them society, to choose to pay more for a program with outcomes nominally equivalent to a much less expensive one is a pertinent question which ought to be researched.[4] First, we may find that in terms of increasing students' potential productivity, that is, as creators of human capital, public institutions are superior agents of social investment. Second, we may find that in terms of current personal satisfaction, that is, as agents of direct consumption, private institutions yield enough pleasure, prestige, and status to secure gifts and tuition at far higher than current levels. The elasticity of demand for private college education is not well understood. Third, we may find that division into private and public sectors has very little meaning in these terms. Any of these findings would have important implications for the Hill Family Foundation, for private colleges, for legislators, and for many others.

The assumption that current levels of educational quality ought to be maintained is weak. Within the eight state group of 80 private independent institutions, quality may vary greatly from a level too low to warrant further support, to a level too high to be within the perception, appreciation, and valuation ranges of students, accrediting associations, employers, and

other evaluators. At best, quality and expenditure should be in that balanced relationship which yields optimum consumption and investment utility--an annual return of from 10 to 15% in the latter case. Low quality programs requiring high levels of expenditure ought to be discontinued, while low levels of expenditure which yield high quality ought to be increased until opportunity to realize returns has diminished to the level of that of alternatives. At the very least, decisions concerning quality should reflect knowledge of research on class size and student faculty ratios. Quality is as variable as cost; blanket endorsement of current levels is neither wise nor warranted.

The assumption that costs of independent private colleges are escalating and that "ways must be found to cut the increasing rate of expenditure" has strong surface validity which, under closer examination, becomes somewhat cloudy. Private college operating costs per credit or full-time equivalent student, which from 1953 to 1970 had been increasing at annual rates in the range of from 3.5 to 8.6% per year, while the consumer price index had been increasing at annual rates in the range from 1.3 to 4.7% per year, are now growing more slowly than the rate of general price inflation.[5] The predominant college cost--salaries and wages--will probably not keep up with the rate of general price inflation during the years immediately ahead, because of the oversupply of qualified faculty and staff, the slow pace of faculty movement toward collective bargaining, and because of the reluctance of colleges to hire additional personnel in the face of the forthcoming decline in traditional college-age population. Other college costs will probably not exceed the rate of general price inflation. At most colleges, enrollments will grow, at least through 1978, and probably through 1980. The net effect of these events may be a relative decline in cost per student which may induce the invalid belief that costs are under control. Declining student enrollments, beyond 1980, militant collective bargaining by faculty and staff, the high yields of

progressive state tax systems which will provide high levels of support for the public sector, and the discovery that high and growing levels of disposable personal income yield unprecedented gift and tuition funds for the private sector, will, however, probably converge to promote rapidly increasing rates of expenditure and reestablish the understanding that continuing attention to costs is required.[6]

In summary, I find the goal of increasing the productivity of institutions of higher education well-conceived and worthwhile but only moderately well described and supported. Limiting the institutional population to no more than eighty seems reasonable. The description of cost control as an important factor in increasing productivity, though incomplete, is adequate. The inadequate treatment of quality of outcomes as a factor in productivity shares in the shortcomings of much of the related literature.

The most important relationship in measuring the productivity of higher education is not the number of student credits per faculty member, nor the cost per credit, but rather the value of a credit relative to the value of the resources required to produce it. When resources are measured in terms of faculty salaries, staff wages, supply prices, etc., credits should be measured in terms of the present value of lifetime earnings which result from the student embodied, college produced competencies those credits represent. There is as much or more opportunity to improve the quality and value of college effects through program and process changes as there is opportunity to reduce the costs of resource requirements.[7]

b. Recommendations. The level of confidence and satisfaction of participants in Hill Family Foundation programs, as well as the return on investments of time, effort, and funds, could probably be increased through a disciplined examination and statement of goals, opportunities, and capabilities. The key questions seem to be:

(1) Why should the Hill Family Foundation invest in higher education? Which opportunities to realize returns on investments in higher education are related to the important problems and issues facing society today?

(2) Which institutions of higher education in the eight state region will survive and which will die regardless of Hill Family Foundation assistance? To which institutions, if any, could Hill Family Foundation assistance make a critical difference?

(3) In light of the many other commitments and opportunities before it, how much should the Hill Family Foundation make available for colleges and universities during each of the ten years 1976 through 1985?

(4) How should these amounts be packaged to make an impact at the experimental, high risk frontier in higher education? How should productivity of colleges and universities be measured?

(5) How should the program of investment in higher education be monitored and evaluated? How should the results be disseminated?

2. Strategies. a. Findings. The Hill Family Foundation is employing three strategies to induce private independent colleges in its eight state service region to increase their productivity: (1) the dissemination of information and expert opinion through correspondence, publication, visitation, consultation, seminars, and workshops; (2) the funding of projects to discover and implement new instructional modes to yield greater efficiencies; and (3) the development and establishment of evaluation procedures and systems for guiding the Foundation and the colleges in improving the program and the projects.

(1) The provision of information, which is basic to any complex plan, invites study which results in comparisons with preconceptions, insight,

reinforcement or surprise, and, very often, motivation to productive invention and innovation. The belief that scholarly citations and detailed descriptions of what is being researched, developed, and institutionalized elsewhere will intimidate faculty and push them into defensive postures seems, however, to have some validity, as does the hypothesis that pre-structured knowledge thwarts creativity. These negative factors do not, however, outweigh the great advantages in sharing knowledge. The availability of special outside funding helps to overcome faculty negativism. Independent re-invention hardly ever results in improvements: indeed, almost all contributors to human progress stand on the shoulders of their predecessors. The strategy of disseminating information and expert opinion through correspondence, publication, visitation, consultation, seminars, and workshops is well-conceived. College presidents, deans, and faculty can make good use of information from sources such as the following which, in the absence of digesting and synthesizing reports, would remain remote and unnoticed:

Human Capital and other publications of the National Bureau of Economic Research.

Costs and Potential Economies and other publications of the Organization for Economic Cooperation and Development.

Planning, Budgeting and Accounting and other publications of the National Association of College and University Business Officers.

Zero-Base Budgeting and other publications in management science.

Variations in the Costs and Income Benefits of Undergraduate Education . . . and other publications of University Microfilms.

Resource Utilization Analysis and other publications of the National Center for Higher Education Management Systems.

Confronting the New Depression in Higher Education and other publications of the Management Division, Academy for Educational Development.

The Production and Cost Behavior of Higher Education Institutions and other publications of the Ford Foundation Program for Research in University Administration.

The Market for College-Trained Manpower and other publications of the Harvard University Press and other university presses.

Quality Education for Less Money and other publications of Jossey-Bass.[8]

(2) The funding of projects proposed by colleges is a tested and honored foundation strategy, a predominant characteristic of which is finitude. In well-defined, well-designed, and well-financed situations this is a strength which lends impetus to periodic review, evaluation, and re-decision. In poorly-defined or poorly-designed situations, or when funding is not timely, the project mode is weak and results in dissipation of funds and resources with little or no impact.

One result of the project funding strategy is the strengthening of strong institutions with competent proposal designers and writers, and the decline and demise of weak institutions without the necessary talent nor time to invest in proposal preparation and presentation. This may be generally advantageous, but sometimes will forestall the Foundation's intention of focusing on genuinely needy and needed colleges and universities.

Another result of the use of the project funding strategy is the highlighting of particular limited purpose activities, which often stimulates extraordinary effort by the participants. Because the costs of this "Hawthorne effect" are unanticipated, and often hidden from view, the project takes on a halo of success which diminishes as the activities

become less experimental and more routine. On balance, however, skillful evaluators and other knowledgeable persons find that the "Hawthorne effect" is generally beneficial.

(3) Evaluation is a necessary part of decision-making and a trait of all reflective persons and institutions which operate on the basis of plans. Its manifestation as an explicit call upon outside resources for background information and investigation is an emphasis promoted by the Tax Reform Act of 1969. Systematized feedback should strengthen the Hill Family Foundation, and the independent colleges through which it contributes to the betterment of human welfare.[9]

Evaluation strategies carry the risk that intelligence purveyed by outside observers may, despite the best of intentions, abash and disconcert the administrative staffs of the Foundation and the colleges. The potential benefits of undertaking a strategy of developing and establishing evaluation procedures and systems is, on balance, well worth risks. Temptations to shoot the messenger can be overcome. Tests of resiliency can become sources of personal growth. Knowledge of the effects of current operations, however poor, can become the basis of improvement.

b. Recommendations. I recommend that the Hill Family Foundation persist in the three strategies it has adopted, and that a fourth strategy be tested as a form of action research. After reexamining its goals and identifying colleges which, because of appropriate combinations of location, program, and internal character, ought to survive, and to which foundation support could make crucial differences, I recommend that the Hill Family Foundation enter into three and five year agreements under which the subject colleges would be excused from the project proposal routine and invited to embrace a symbiotic relationship with the Foundation and outside consultants for the development of demonstrations of effective management which adjusts

college direction as opportunity and social need change. This fourth, developmental partnership strategy should be mounted, I believe, alongside the information dissemination and evaluation design strategies, and a reduced level of proposal based projects.

3. Implementation. a. & b. Findings and Recommendations. The Hill Family Foundation is implementing three strategies--information dissemination, project funding, and evaluation design--to increase the productivity of the teaching-learning process, through four steps concerning which I have findings and recommendations.

(1) Seventy-one of the eighty private independent colleges in the eight state region participated in an excellent descriptive study of enrollments, finances, capacity, and faculty compensation covering the years 1967 to 1972. The college presidents identified the problems they face, and the solutions they believe Hill Family Foundation could facilitate.

Prominent among the problems were enrollment dependency, high costs of student financial aids, costs increasing faster than income, lack of funds to pay for instructional innovations, and unrealistically low student faculty ratios.[10] A summary of the study, printed and distributed to all participants, is the foundation document of the college productivity programs.

The present condition and prospect of each college would be further elucidated by (a) linking long-term debt, annual interest charge on long-term debt, endowment, annual income from endowment, tuition level, percentage of operating expenditures covered by tuition, annual operating surplus or deficit, percentage of current expenditures devoted to student financial aids, percentage of faculty tenured, percentage of faculty over 60 years of age, enrollment trends, retention and graduation rates, student faculty ratios, and faculty compensation levels in institutional profiles;

(b) by studying potential-student population patterns, each college's share of the high school graduate pool, and pertinent relevant trends; (c) by relating graduate school and job success (earnings) to student major programs of study; and (d) by surveying trends in demand, and estimates of the future need for graduates with different majors. Taken together, the resulting data would yield measures of institutional resiliency, new program opportunities, and demonstrated capacity to match performance to good intentions, which could be used in predicting which institutions will survive with, and without, Hill Family Foundation help. Such predictions, in turn, could result in better decisions concerning which colleges to help.

The decisions concerning whether to assist those colleges which are unable to provide this basic data should be made on the basis of statewide information concerning college-going rates, potential-student populations, the number of private independent colleges in the state, and proximity to other institutions of higher education. Five year grants to establish institutional research, evaluation, and planning offices, in the colleges which are greatly needed by their service regions, should then be given high priority.[11]

(2) On the basis of the descriptive study, and a review of books and monographs written by and for the Carnegie Commission on Higher Education, the Hill Family Foundation staff prepared and distributed an Overview of the Concept of Productivity in Higher Education. Building on the conclusions of the earlier study--"colleges need more income, and ways must be found to cut the increasing rate of expenditures"--the idea that "investing Foundation dollars in new forms of institutional modes . . . will yield greater efficiencies" was added to the Foundation's published philosophy.[12] This commendable document announced three program

installments--admissions, productivity, and development--the second of which defined productivity in higher education, recounted methods of reducing costs, identified the prominent roadblocks, and, through related memos, invited the colleges to make proposals responsive to Foundation concerns and interests.

Although the implementation of the information dissemination strategy could be strengthened through the studying, paraphrasing, quoting, and referencing of the broader collection of literature cited above,[3] the Overview . . . is fully adequate for Hill Family Foundation purposes. Six points of interest and concern listed in the Overview . . . are responsive to the immediate challenge to increase college productivity, recognize the essential characteristics of teaching (as contrasted with researching) institutions, and quite appropriately prompt proposals for innovation and demonstration rather than invention and experimentation.

On two occasions during site visits I discovered the firm conviction that the central problem before the colleges was overstaffing in light of current student population trends, but generally there is little recognition of changes in demand for various programs (other than education).[13] In colleges with student faculty ratios of less than 18:1, faculty retraining, retooling, reassignment, exchange, early retirement, and other staff reduction techniques deserve careful study and support, as do studies of the changing market for college graduates.

(3) An Advisory Committee of prominent educators was appointed to review and recommend proposals for funding. The extent to which Advisory Committee recommendations reflect a serious study of the circumstances in and surrounding the colleges making proposals is not clear. Hill Family Foundation policy concerning accreditation, capital purchases, endowment, religion, publication, travel, period of grant, grant renewal, cost sharing,

and overhead was clearly announced; preference for projects which stand little likelihood of finding starter funds elsewhere was also evident; and the usual statements concerning mission, support of the college president, expected results, and statements demonstrating knowledge of attempts by others to solve related problems were all required.[14] I have the strong impression, however, that the subsequent sixteen production project awards were made largely on the basis of the quality of the proposal, as a document, rather than on the basis of the need, capacity, prospects, and potential of the college doing the proposing. Although the site visits and background studies necessary to mount an alternate project selection system would be costly, the ultimate results might fully justify the extra expenditures. I recommend that the Hill Family Foundation undertake an experiment to discover and, hopefully, demonstrate how a poorly written proposal can be developed into a successful productivity project.

(4) A commendable feature of the college productivity program of the Hill Family Foundation is the incorporation of an evaluation strategy which is being implemented through a project definition, goal, and strategy survey; traveling observer reports; site visitations; the preparation of evaluation reports; the distribution of evaluation materials; and inservice evaluation training sessions.

I find that college students expect evaluation to be part of the learning process, prefer formal procedures, and demand explicit criteria for such evaluations. Although teaching faculty readily evaluate the work of students, they, on the other hand, greatly resist evaluation of their efforts. Faculty involved in the Hill Family Foundation programs reported that they were aware of the requirement that evaluation be undertaken, and many were anxiously awaiting the reports of traveling observers. Few, however, had developed explicit plans for measuring the results of their

projects. Those who had attended the Spring Hill workshop, commented favorably on it while revealing that they had not had time to read nor use the evaluation workbook.[15] Very few took advantage of the open-endedness of the project definition, goal, and strategy survey instrument despite their readiness to complain that the preprinted responses were inadequate.[16] One interviewee recognized that students evaluate courses, instructors, programs, and colleges, and "can have devastating effects as they vote with their feet to enroll elsewhere." Although there is widespread and ready understanding that the prices of input factors--faculty services, supplies, equipment, etc.--represent social valuations, there is very limited understanding that student demand and earnings of former students represent social valuations of college program outcomes. Many of these colleges need on-site assistance in the development of evaluation systems and procedures.

The written survey technique seems to be economical and useful. I recommend that it be used by Hill Family Foundation in an interactive mode to help the colleges design and refine systems and procedures for the evaluation of productivity projects, programs of instruction, teaching effectiveness, and for the evaluation of the college as an institution embedded in, and serving, a society to which it is accountable for results.

Visitations are expensive and should, I think, be shared less frequently, but more widely. I recommend that the practice of using traveling observers and three-man site visitation teams be modified and that, instead, two-man teams be assigned to work with each college through correspondence and a series of one-day visits.

Evaluation workshops are highly valued and should be offered at least twice a year until each college has a fully qualified management team and a five-year program and financial development plan. Evaluation skills are a necessary part of the cybernetic system which will make the difference

between survival and demise in many of these colleges. A very high priority of attention and funding for the development of evaluation ability is warranted.

4. Results. a. Findings. Hill Family Foundation efforts to increase the productivity of the teaching-learning process has resulted in the refinement and enunciation of goals, the adoption of strategies, and the undertaking of implementing steps (all discussed above) concerning which I find the following:

(1) The Hill Family Foundation is supporting actual operating activities in the colleges rather than merely contributing to the purchase of equipment, the publication of monographs, the underwriting of sabbatical travel, or the building of monuments in the form of physical facilities. The colleges, to the best of my knowledge, are administering the grants in accordance with agreed-upon terms, and are meeting a reasonable share of the costs.

(2) Distant evaluators often overlook matters which mean a great deal to those involved in troublesome situations, and as a consequence often prescribe sweeping and simplistic solutions. The Hill Family Foundation has been sensitive to the preferences and concerns of the colleges. It has not imposed uniform solutions on institutions with different, though outwardly similar, problems.[17] This approach greatly strengthens the motivation of participants over that which is characteristic of projects which provide a standard sum of money to each institution which adopts a new accounting system, founds a chair in history, or increases the number of books in the library.

(3) Most of the colleges with funded projects are, on closer view, in much better financial condition than they seemed to be from a distance. Long-term debt is in reasonable balance with endowments; student faculty

ratios are low; tuition levels have been increasing less rapidly than the disposable personal income of students and their families; income has equaled current expenditure. Although Jamestown College was funded, other seemingly distressed institutions like William Penn College, Lea College, and Upper Iowa University were not. At the same time, I found that the funded colleges are not sufficiently wealthy to undertake substantial experimentation. Their situations seem to require the prudence described in Pope's couplet: "Be not the first by whom the new are tried, nor the last to lay the old aside." Genuine research in instructional methodology is not possible without external support.

(4) Most of the projects are low risk, low profile projects of an innovative, rather than an inventive, nature. They are based on analogous projects which were observed in other colleges or discovered through literature describing practices elsewhere. The amounts of money involved are small; faculty time commitments are very limited; and, except at Augustana, non-participating faculty have little knowledge of the Hill Foundation projects. Only Wartburg is undertaking a project which may eventually impact on a substantial share of the total faculty and student body.[18]

(5) Although there has been an increase in the awareness of some faculty at Gustavus Adolphus, most faculty, there and elsewhere, are woefully ignorant of the financial and employment security problems their institutions will face within the next ten years. They don't understand where their market is, what they are producing, nor how coming changes will affect them. Consequently they do not readily support the administrators who are trying to develop policies and mechanisms which will help avert disaster and ease adjustment to new circumstances. Many faculty seem to be "debating the arrangement of deck furniture on the Titanic."[19]

(6) Many of the projects would have been undertaken without outside support. Hill Foundation funds are promoting earlier implementation and, in some cases, substantial expansion in the number of persons involved. Though this has undoubted importance, it does not fit the image of pioneering and risking which the Foundations may be seeking to sustain.

(7) Hill Foundation Funding is having a catalytic effect in many college situations. Faculty often conceptualize alternate modes of instruction but are forestalled by lack of funds or by the opposition of colleagues who fear the effects of change. External sponsorship, coupled with modest grants of funds, provides an escape from institutional webs of constraint and actualizes faculty dreams and aspirations. The project at St. Olaf College seems to demonstrate this process as does the Augustana Center for the Support of Excellence in Teaching.[20] The funding of many small projects through on-campus centers is increasing the effectiveness of grants from the Hill Foundation. Local decision makers are more responsive to situations which they observe in person than are remote decision makers who must operate abstractly.

(8) College personnel involved in Hill Foundation projects are learning how to write good proposals for funding by other foundations and institutions. At Gustavus Adolphus, the Hill funded cost analysis and resource requirement prediction activities of the Planning Council are providing the experience upon which a related proposal to Exxon Foundation will be based. At Augustana, Hill Foundation funded experience in Kellerizing chemistry courses may lead to consultation with the Institute for Personalized Systems of Instruction at Georgetown University.

(9) One of the most important long-term results of Hill Foundation efforts to increase the productivity of the teaching-learning process is the creation of evaluation, planning, and management conscientious and

related competencies. A few people at each of the colleges I visited are developing an awareness of what productivity means, how it can be increased, and how increased productivity will help the college weather the storms ahead. There is growing recognition that improvement in productivity can take place only if we pay attention to the value of outcomes as well as the costs of inputs.[21]

b. Expectations. Hill Family Foundation funding was months later than the colleges anticipated it would be; as a consequence many projects are lagging behind schedule and their results are undetermined. Nonetheless, there is evidence to support the following expectations:

(1) Some genuine experimentation with alternate modes of instruction will result in (a) savings of faculty time in laboratories, (b) a reduced requirement for graduate teaching assistants, (c) lower laboratory supply and equipment usage, (d) a reduction in student laboratory hours, and (e) lower attrition levels, all with no decline in quality of learning outcomes.[22] Although the Drake University project, to take one example, is action research rather than research to test hypotheses, it is well designed, and under the control of faculty who have an excellent grasp of the factors involved in instruction productivity; the prognosis for increased productivity is good.

(2) A major shift in responsibility for the learning process from instructor to student through internships, independent study, etc., with the concomitant dropping of some low enrollment courses, will increase instructional productivity at some of the colleges. The Wartburg College project and the internship program at Augustana College both look promising.[23]

(3) Projects designed to retool and reassign faculty will probably not be very effective in the immediate future. Faculty blindness to the

underlying realities will probably clear up after some of their colleagues are laid off in the 1980s. In the meantime:

> "An institution should demonstrate its commitments to effective instruction . . . standards and the spreading of the gospel of quality . . . (Learning facilitators) should be appointed, and among their responsibilities for mobilizing their institution's total instructional resources should be the concern for the effective utilization of technology. Under their auspices, information about instructional technology should be maintained and made available to faculty members. They should arrange training sessions for faculty members interested in developing learning materials that utilize advanced media and procedures. They should serve as campus liaison with governments, foundations, and other sources of financial support for introducing promising innovations in the utilization of new media and techniques. They should assume responsibility for identifying effective uses of technology on campus and, when appropriate, for calling it to the attention of the total faculty and of regional, national, or professional organizations engaged in the development and distribution of educational materials."[24]

Augustana College may develop such a learning facilitator, and may also improve internal evaluation capabilities, as a result of the Hill Foundation support of the Augustana Center for the Support of Excellence in Teaching.[25] Even so, the effects on the quality of learning will probably be discernible to only a few persons inside the institution and almost no one outside the institution.

(4) The opportunities to change and improve the product of the institution by adding and dropping major programs of study will probably not be exploited even though some of the colleges claim they intend to use the College and University Environmental Scales, Institutional Self Studies, and the Undergraduate Record Examination, and plan to undertake market studies, placement studies, and long-term graduate follow-up studies.[26] Among the colleges I visited, the best hope for timely recognition of external realities exists at Gustavus Adolphus College where communication with the National Center for Higher Education Management Systems at the

Western Interstate Commission for Higher Education in Boulder, Colorado, may lead the college Planning Council beyond the budget simulations they now contemplate to the measurement of benefits and outcomes.

(5) I can find no evidence that Hill Family Foundation efforts to increase the productivity of the teaching-learning process have stimulated the invention of any new modes of instruction which should be transferred to other colleges. However, each of the institutions I visited is engaged in activities which will result in demonstrations of innovation which will have a lasting effect on the college and should provoke interest and emulation in the region.

c. Recommendations. The Hill Foundation could increase its effectiveness in getting results from productivity projects by revising its policies to insist (1) that completion of a search of the relevant literature be demonstrated through a brief written description of analogous efforts undertaken elsewhere; (2) that the costs, processes, expected results, and the relationship of those results to institutional and societal goals, be specified more formally; (3) that an anticipated schedule of events from project initiation through completion be developed; and (4) that a commitment to publish project reports through the Educational Resources Information Center, or a comparable system, be included in each proposal.[27] The Hill Foundation, in turn, should (5) provide larger sums of money--no less than $10,000 per year for any project--over (6) longer periods of time--no fewer than three years. Lesser amounts for shorter periods are not liable to have any impacts worthy of Foundation notice.

5. Conclusions. The Hill Family Foundation independent college program dedicated to increasing the productivity of the teaching-learning process is well launched and can be improved. Seventy-two of eighty private colleges in the eight state region participated in an investigative

background study,[28] the results of which were combined with findings sifted from a review of the pertinent literature on college productivity in an excellent overview of alternative opportunities.[29] Guidelines and criteria were published, proposals were invited and received, a learned committee reviewed and advised, grants were made, productivity projects were undertaken by sixteen colleges. A commendable effort to develop and establish an evaluation system was launched.

The Hill Foundation's effectiveness in promoting college productivity could probably be improved through longer--three to five year--commitments, of larger--$10,000 to $100,000--sums of money, to a limited number of colleges, which would be willing to risk effort on important productivity research, but would be unable to do so without external funds and supportive consultation, would be devoted to rigorous project design and evaluation, and which would agree to the publication and dissemination of results. If, in addition, the Foundation would enter into partnerships with colleges which recognize that the productivity question in higher education is not one of how to reduce the time and money spent per student, but rather how to increase the value of student-embodied competencies to create and produce over a lifetime, the Foundation might well bring about the major program and faculty changes which will assure a college's survival during the last quarter of this century.[30]

Notes.

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